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(72) Inventors; and

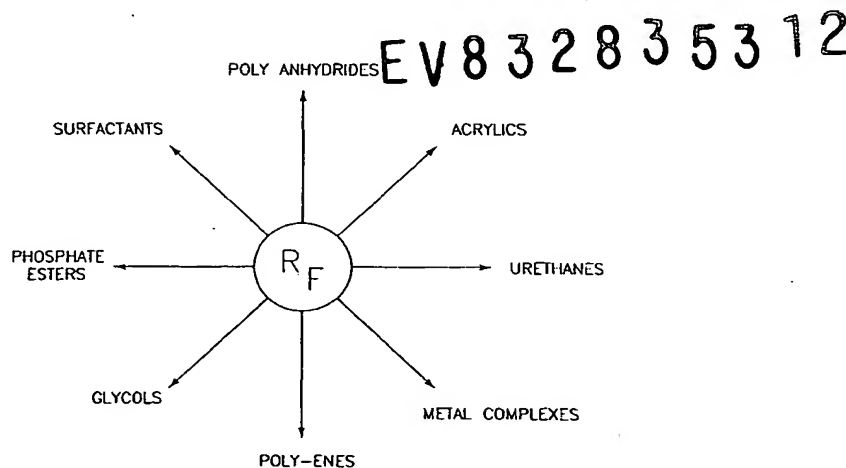
(75) Inventors/Applicants (for US only): **BOGGS, Janet** [US/US]; 6925 N. 900 East, Brownsburg, IN 46112 (US). **BRANDSTADTER, Stephan, M.** [US/US]; 3946 N. Washington Blvd., Indianapolis, IN 47906 (US). **CHIEN, John** [US/US]; 3318 Humbolt Street, West Lafayette, IN 47906 (US). **SHARMA, Vimal** [IN/US]; 2101 Cumberland Avenue, 5104, West Lafayette, IN 47906 (US). **EDWARDS, Bradley, E.** [US/US]; 3704 Woodcliff Drive, Lafayette, IN 47905 (US). **HEDRICK, Victoria** [US/US];9262 South 300 E., Brookston, IN 47923 (US). **JACKSON, Andrew** [US/US]; 3346 Whirl Away Court, West Lafayette, IN 47906 (US). **LEMAN, Gregory** [US/US]; 3319 Crawford Street, West Lafayette, IN 47906 (US). **NORMAN, Edward** [US/US]; 942 St. Matthews Road, Chester Springs, PA 19425 (US). **KAUFMAN, Robert** [US/US]; 8129 Stanford Ave., St. Louis, MO 63130 (US).(74) Agents: **HÝTA, Robert, C.** et al.; Well St. John, P.S., 601 West First Street, Suite 1300, Spokane, WA 99201-3828 (US).

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(54) Title: PRODUCTION PROCESSES AND SYSTEMS, COMPOSITIONS, SURFACTANTS, MONOMER UNITS, METAL COMPLEXES, PHOSPHATE ESTERS, GLYCOLS, AQUEOUS FILM FORMING FOAMS, AND FOAM STABILIZERS



(57) Abstract: Production processes and systems are provided that include reacting halogenated compounds, dehalogenating compounds, reacting alcohol's, reacting olefins and a saturated compounds, reacting reactants having at least two -CF<sub>3</sub> groups with reactants having cyclic groups. R<sub>F</sub>-compositions such as R<sub>F</sub>-intermediates, R<sub>F</sub>-surfactants, R<sub>F</sub>-monomers, R<sub>F</sub>-monomer units, R<sub>F</sub>-metal complexes, R<sub>F</sub>-phosphate esters, R<sub>F</sub>-glycols, R<sub>F</sub>-urethanes, and/or R<sub>F</sub>-foam stabilizers. The R<sub>F</sub> portion can include at least two -CF<sub>3</sub> groups, at least three -CF<sub>3</sub> groups, and/or at least two -CF<sub>3</sub> groups and at least two -CH<sub>2</sub>- groups. Detergents, emulsifiers, paints, adhesives, inks, wetting agents, foamers, and defoamers including the R<sub>F</sub>-surfactant composition are provided. Acrylics, resins, and polymers are provided that include a R<sub>F</sub>-monomer unit. Compositions are provided that include a substrate having a R<sub>F</sub>-composition thereover. Aqueous Film Forming Foam ("AFFF") formulations are provided that can include R<sub>F</sub>-surfactants and/or R<sub>F</sub>-foam stabilizers are provided.

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